AMENDMENTS TO THE CLAIMS

1. (currently amended) A climate control system including at least one air passage and at least one damper for regulating flow of air through said at least one air passage, said climate control system further comprising:

an electric motor coupled to said damper for changing the position of the damper;

a control module including a hand-manipulated hand control element for setting a desired damper position for said at least one damper and a control head for generating electrical power signals for driving said electric motor to move said damper to said desired damper position;

wherein said electric motor comprises a motor housing enclosing therein: a stator, a rotor inside said stator, a motor shaft attached to said rotor, a commutator ring mounted on said motor shaft, power brushes mounted on said housing and wiping said commutator ring for feeding electric power to said motor for driving said rotor, an encoder ring mounted on said motor shaft having a plurality of ~~encoder-segment-sets of opposite~~ encoder segments ~~with significantly different amounts of impedance between opposite encoder segments of adjacent encoder-segment sets~~ separated from one another about the motor shaft, and encoder brushes mounted on said housing and wiping said encoder ring for forming an encoder circuit through said ~~opposite~~ encoder segments ~~of said encoder-segment sets~~

with said encoder segments closing and opening said encoder circuit upon rotation of said motor shaft;

said electric motor further including power and encoder terminals positioned externally of said motor housing, at least one power terminal being electrically coupled to one of said power brushes and at least one encoder terminal being electrically coupled to one of said encoder brushes;

wherein said control head is coupled to said at least one power terminal for applying said electrical power signals to said electric motor for moving said damper and to said at least one encoder terminal for monitoring the impedance of said encoder circuit to thereby determine when the damper is in said desired damper position.

2. (original) A climate control system as in claim 1, wherein said electric motor is part of a motor actuator including gears arranged between said electric motor and said damper.

3. (original) A climate control system as in claim 2, wherein there are a plurality of passages, a plurality of dampers, and a plurality of motor actuators, each motor actuator being driven separately by said control module.

4. (original) A climate control system as in claim 1, wherein

said motor has at least two power terminals and at least two encoder terminals separate from said at least two power terminals.

5. (original) A climate control system as in claim 1, wherein said electric motor is a DC motor.

6. (original) A climate control system as in claim 1, wherein said motor housing is formed of a housing can and a housing cap, with the power and encoder brushes and terminals being mounted on the cap.

7. (original) A climate control system as in claim 6, wherein the motor shaft passes through the housing can at one end thereof and is rotatably mounted in the housing cap at its opposite end.

8. (original) A climate control system as in claim 6, wherein said housing cap is formed of a metal disk and a cylindrically-shaped insulating material for extending into said housing can and for supporting said power and encoder brushes as well as said power and encoder terminals.

9. (currently amended) An electric motor actuator comprising an electric motor and gears, wherein, said electric motor comprises a motor housing enclosing therein: a stator, a rotor inside said

stator, a motor shaft attached to said rotor, a commutator ring mounted on said motor shaft, power brushes mounted on said housing and wiping said commutator ring for feeding electric power to said motor for driving said rotor, an encoder ring mounted on said motor shaft having a plurality of encoder-segment sets of ~~opposite~~ corresponding encoder segments with significantly different amounts of impedance between ~~opposite~~ corresponding encoder segments of adjacent encoder-segment sets, and encoder brushes mounted on said housing and wiping said encoder ring for forming an encoder circuit through said ~~opposite~~ corresponding segments of said encoder-segment sets;

said electric motor further including power and encoder terminals positioned externally of said motor housing, at least one power terminal being electrically coupled to one of said power brushes and at least one encoder terminal being electrically coupled to one of said encoder brushes.

10. (original) An electric motor actuator as in claim 9, wherein said motor has at least two power terminals and at least two encoder terminals separate from said at least two power terminals.

11. (original) An electric motor actuator as in claim 9, wherein said electric motor is a DC motor.

12. (original) An electric motor actuator as in claim 9, wherein said motor housing is formed of a housing can and a housing cap, with the power and encoder brushes and terminals being mounted on the cap.

13. (original) An electric motor actuator as in claim 12, wherein the motor shaft passes through the housing can at one end thereof and is rotatably mounted in the housing cap at its opposite end.

14. (original) An electric motor actuator as in claim 12, wherein said housing cap is formed of a metal disk and a cylindrically-shaped insulating material for extending into said housing can and for supporting said power and encoder brushes as well as said power and encoder terminals.

15. (currently amended) An electric motor including a motor housing enclosing therein: a stator, a rotor inside said stator, a motor shaft attached to said rotor, a commutator ring mounted on said motor shaft, power brushes mounted on said housing and wiping said commutator ring for feeding electric power to said motor for driving said rotor, an encoder ring mounted on said motor shaft having a plurality of encoder-segment sets of ~~opposite~~ corresponding encoder segments with significantly different amounts of impedance between ~~opposite~~ corresponding encoder segments of

adjacent encoder-segment sets, and encoder brushes mounted on said housing and wiping said encoder ring for forming an encoder circuit through said ~~opposite~~ corresponding segments of said encoder-segment sets;

said electric motor further including power and encoder terminals positioned externally of said motor housing, at least one power terminal being electrically coupled to one of said power brushes and at least one encoder terminal being electrically coupled to one of said encoder brushes.

16. (original) An electric motor as in claim 15, wherein said motor has at least two power terminals and at least two encoder terminals separate from said at least two power terminals.

17. (original) An electric motor as in claim 15, wherein said electric motor is a DC motor.

18. (original) An electric motor as in claim 15, wherein said motor housing is formed of a housing can and a housing cap, with the power and encoder brushes and terminals being mounted on the cap.

19. (original) An electric motor as in claim 18, wherein the motor shaft passes through the housing can at one end thereof and is

rotatably mounted in the housing cap at its opposite end.

20. (original) An electric motor as in claim 18, wherein said housing cap is formed of a metal disk and a cylindrically-shaped insulating material for extending into said housing can and for supporting said power and encoder brushes as well as said power and encoder terminals.

21. (original) An electric motor as in claim 15 wherein is further included an electrical circuit having first and second input lines for receiving dc voltage thereacross to provide said electric power and first, second and third output lines, wherein said first and second output lines respectively electrically couple opposite ones of said power brushes to respective ones of said first and second input lines for feeding said dc voltage to said power brushes and said third output line electrically couples one of said encoder brushes to both of said first and second input lines via rectifiers for feeding said dc voltage in a rectified form to said one of said encoder brushes, whereby said one of said encoder brushes receives said dc voltage with a fixed polarity, regardless of the polarity of the dc voltage applied to the first and second input lines.

22. (previously presented) An electric motor as in claim 21, wherein said electrical circuit is inside said motor housing.

23. (original) An electric motor as in claim 15, wherein there is only one encoder terminal.

24. (original) A climate control system as in claim 1, wherein is further included an electrical circuit having first and second input lines for receiving dc voltage thereacross from said control head to provide said electric power and first, second and third output lines, wherein said first and second output lines respectively electrically couple opposite ones of said power brushes to respective ones of said first and second input lines for feeding said dc voltage to said power brushes and said third output line electrically couples one of said encoder brushes to both of said first and second input lines via rectifiers for feeding said dc voltage in a rectified form to said one of said encoder brushes, whereby said one of said encoder brushes receives said dc voltage with a fixed polarity, regardless of the polarity of dc voltage applied to the first and second input lines.

25. (previously presented) A climate control system as in claim 24, wherein said electrical circuit is inside said motor housing.

26. (previously presented) A climate control system as in claim 1, wherein there is only one encoder terminal.

27. (original) An electric motor actuator as in claim 9, wherein is further included an electrical circuit having first and second input lines for receiving DC voltage thereacross to provide said electric power and first, second and third output lines, wherein said first and second output lines respectively electrically couple opposite ones of said power brushes to respective ones of said first and second input lines for feeding said dc voltage to said power brushes and said third output line electrically couples one of said encoder brushes to both of said first and second input lines via rectifiers for feeding said dc voltage in a rectified form to said one of said encoder brushes, whereby said one of said encoder brushes receives said dc voltage with a fixed polarity, regardless of the polarity of dc voltage applied to the first and second input lines.

28. (previously presented) An electric motor actuator as in claim 27, wherein said electrical circuit is inside said motor housing.

29. (previously presented) An electric motor actuator as in claim 9, wherein there is only one encoder terminal.

30. (new) A climate control system as in claim 1, wherein:

there are first and second encoder brushes;

first and second conductive encoder segments of said plurality

of encoder segments form a first conductive encoder-segment set with said first and second conductive encoder segments of the conductive encoder-segment set being separated from one another about the motor shaft but being conductively coupled with one another; and

the first encoder brush is positioned for contacting the first conductive encoder segment when the second encoder brush is positioned for contacting the second conductive encoder segment for closing the encoder circuit.

31. (new) An electric motor actuator as in claim 9, wherein said corresponding segments are opposite segments.

32. (new) An electric motor actuator as in claim 9, wherein:

there are first and second encoder brushes;

first and second conductive encoder segments form one of said encoder-segment sets, with said first and second conductive encoder segments of the one encoder-segment set being separated from one another about the motor shaft but being conductively coupled with one another; and

the first encoder brush is positioned for contacting the first conductive encoder segment when a second encoder brush is positioned for contacting the second conductive encoder segment for closing the encoder circuit.

33. (new) An electric motor as in claim 15, wherein said corresponding segments are opposite segments.

34. (new) An electric motor actuator as in claim 15, wherein:

there are first and second encoder brushes;

first and second conductive encoder segments form one of said encoder-segment sets, with said first and second conductive encoder segments of the one encoder-segment set being separated from one another about the motor shaft but being conductively coupled with one another; and

the first encoder brush is positioned for contacting the first conductive encoder segment when a second encoder brush is positioned for contacting the second conductive encoder segment for closing the encoder circuit.